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Diagnosis and Treatment Procedures for Patients With Anxiety Disorders by the Psychiatric Consultation Liaison Service in a General Hospital in Germany:
A Retrospective Analysis

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ABSTRACT

Objective: To investigate the population of patients with anxiety disorders in a general hospital in Germany who required treatment by a consultation psychiatrist.

Method: A retrospective investigation of psychiatric consultations concerning 119 patients with anxiety disorders (*DSM-IV* criteria) from January 1, 2011, to December 31, 2012, was conducted in a general hospital of the Charité Berlin, Berlin, Germany. The frequency of different anxiety disorders, the distribution of anxiety disorders among the departments of the general hospital, and the recommended treatment procedure were investigated.

Results: The largest group of patients with anxiety symptoms presented panic attacks. Many of these patients sought treatment in the emergency department of the hospital primarily due to their anxiety symptoms. Within the group of somatically ill patients, panic attacks were prominent, especially in patients with cardiac or respiratory diseases. Treatment procedures comprised pharmacologic and psychotherapeutic interventions. Benzodiazepines and psychoeducation were common acute treatments; antidepressants, pregabalin, and psychotherapy were recommended for long-term treatment.

Conclusions: Many patients who primarily suffer from symptoms of anxiety seek treatment in a general hospital, especially in the emergency department. It is therefore very important for the individual patient as well as the health care system that the correct treatment is initiated. The consultation-liaison psychiatric service within a general hospital is important to ensure the best possible diagnostic procedures as well as treatment for patients with anxiety disorders.

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Anxiety disorders are among the most common mental health problems. The National Comorbidity Survey[1] estimated that 1 of 4 Americans will experience an anxiety disorder throughout the course of their lives, thus making anxiety disorders more common than depression. A recent mental health survey in Germany[2] reports an estimated 12-month prevalence of 15.3% for anxiety disorders, making anxiety disorders the most frequent mental disorder in Germany. Patients with anxiety disorders (according to *DSM-IV* criteria) such as panic disorder, general anxiety disorder (GAD), and posttraumatic stress disorder (PTSD) are frequent visitors to health care institutions.[3] However, they often primarily present somatic symptoms such as heart palpitations, gastrointestinal problems, sweating, and pain.[4] Fleet et al[5] demonstrated that one quarter of patients presenting to a hospital emergency department in Canada with chest pain suffered from panic disorder. In 98% of cases, this disorder was not diagnosed by the attending cardiologist.[5] This point illustrates an important issue in primary health care: since patients who suffer from anxiety disorders often present with physical symptoms, they frequently undergo a range of unnecessary tests and ineffective treatments if the anxiety disorder is not diagnosed. This nondetection results not only in frustration for the patient, who continues to suffer from the symptoms and a possible deterioration of his or her mental health since the illness remains untreated, but also in high additional medical costs, which constitute a financial burden for health care systems.[6]

Furthermore, hospital patients who are suffering from a primarily somatic illness also can comorbidly present anxiety-related physical symptoms in the context of an anxiety disorder. Härter et al,[7] for example, report that patients with cardiac disorders, hypertension, gastrointestinal problems, genitourinary disorders, and migraine have an increased risk of anxiety disorders. Those findings are consistent with that of Roy-Byrne et al,[8] who identified functional gastrointestinal diseases, asthma, cardiovascular diseases, cancer, and chronic pain as frequent comorbidities in patients with an anxiety disorder. Unsurprisingly, anxiety disorders also increase the length of convalescence, leading to longer periods of inpatient care and therefore increased costs.[9]

These various aspects highlight the importance of adequate diagnosis and treatment of anxiety disorders in patients presenting to primary health care institutions. In a general hospital, the presence of a consultation-liaison psychiatry service is a vital element in achieving the correct diagnosis and specific treatment for patients with anxiety disorders. In this setting, a psychiatrist consults with patients in nonpsychiatric departments of a hospital and provides help with psychiatric diagnoses and treatments to specialists from other fields of medicine. We present retrospective data investigating the number of patients with anxiety disorders who received a consultation with a psychiatrist in a general hospital in Germany. We investigated the frequency of different anxiety

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Clinical Points

- Patients with anxiety disorders, especially panic disorders, often present to the emergency department of a general hospital.
- Patients with somatic illnesses, especially with cardiac or respiratory diseases, often experience symptoms of anxiety in the form of panic attacks.
- Treatment recommendations for anxiety disorders by the consultation psychiatrist encompass benzodiazepines and psychoeducation in the acute phase and antidepressants, pregabalin, and psychotherapy in the long term.

disorders and the distribution of anxiety disorders among the departments of the general hospital. Furthermore, we give insight into the general treatment recommended by the attending psychiatrist.

METHOD

A retrospective investigation of psychiatric consultations for patients with anxiety disorders in a 2-year-period (January 1, 2011, to December 31, 2012) in one of the general hospitals of the Charité Berlin, Campus Benjamin Franklin, Berlin, Germany, was conducted. At the time of the study, this hospital had 35 departments and 1,200 beds. The department of psychiatry was not located in the main hospital, thus primarily psychiatric patients were admitted elsewhere. For patients with psychiatric disorders in the main hospital, the psychiatric consultation service was implemented.

For this study, based on the hospital's clinical records, we analyzed the data of all patients who had been diagnosed with an anxiety disorder according to *DSM-IV* criteria by a consultation psychiatrist. We investigated the sections of the hospital that requested psychiatric consultations for patients with anxiety disorders, the exact diagnosis, their primary reason for presentation to the hospital for treatment, as well as the treatment recommended by the respective consultation psychiatrist. The information considered was taken from the patients' files after they had been released from the clinic. Psychiatric consultations were performed by various psychiatrists, one of whom is a coauthor of this study (A.Q.). The clinical records were analyzed by an author who did not perform psychiatric consultations (C.A.).

All patients agreed to a general use of their anonymized data for scientific research, as they were being treated at a university hospital. Approval for this retrospective analysis was not needed as confirmed by the Ethics Committee of the Charité—University Medicine Berlin. Descriptive analysis was performed using means and standard deviations. Statistical analyses were performed using IBM SPSS for Windows, version 21 (Armonk, New York).

RESULTS

Overall, 1,948 psychiatric consultations were requested throughout the 2-year course of the study. Of these, 119 (6.1%) regarded patients primarily diagnosed with an anxiety disorder (based on *DSM-IV* criteria) by the psychiatrist during the consultation. The largest group of patients with symptoms of fear and anxiety, which by far exceeded the other groups, presented with acute panic attacks. This group included all patients diagnosed with panic disorder with or without agoraphobia, as well as patients with panic attacks who did not yet fulfill the *DSM-IV* time criterion for panic disorder. The group did not include patients who experienced panic attacks in the context of a different anxiety disorder. Seventy patients (58.8%) had panic disorder or attacks, 28 (23.5%) showed symptoms of anxiety after a traumatic experience, 11 (9.2%) exhibited strong symptoms of worry and anxiety and were diagnosed with GAD, 9 (7.6%) were diagnosed with hypochondriasis, 7 (5.9%) were diagnosed with obsessive-compulsive disorder (OCD), and 4 (3.4%) were diagnosed with a specific phobia. Also, 109 patients fulfilled the criteria for only 1 anxiety disorder, while 10 patients fulfilled the criteria for 2 different categories (Table 1).

The number of women with panic attacks, trauma-related anxiety, and GAD significantly exceeded that of men. In regard to hypochondriasis, the reversed pattern was detected. No gender bias was observed for cases of OCD and specific phobias. Patients of all age groups, ranging from 19 to 86 years (mean = 48.76, SD = 16.57), presented with anxiety symptoms.

The department with the highest number of consultations regarding patients with anxiety disorders was the emergency department with 49 consultations, followed by the department of internal medicine with 16. Ten consultations took place in the department of psychosomatic medicine; 8 in the neurology department; 7 in the cardiology department; 7 in the trauma surgery department; 5 in the gastroenterology department; 4 in the intensive care unit; 2 each in the rheumatology, dermatology, hematology, nephrology, and gynecology departments; and 1 each in the outpatient pain clinic, the general surgery department, and the radiology department. The distribution of patients with different anxiety disorders among the various departments is shown in Table 2.

Of the patients who received consultations due to symptoms of anxiety, 65 (54.6%) sought treatment in the hospital primarily because of these anxiety symptoms. Of patients with symptoms of fear and anxiety who received consultations, 49 (41.2%) were treated in the emergency department, and of these, 42 (85.7%) primarily presented symptoms of fear and anxiety. Approximately half (49.0%) of the patients who were seen by the consultation psychiatrist in the emergency department were experiencing acute panic attacks. The second and third largest groups of patients with panic attacks were found in the departments of internal medicine and cardiology.

Among the 54 patients (45.4%) who were being treated in the hospital primarily for somatic reasons, 14 (25.9%) had cardiac or respiratory illnesses. Ten patients (18.5%) were being treated for problems directly associated with their

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Table 1. Diagnoses Made by the Consultant Psychiatrist for Men and Women (N = 119)[a]

	No Comorbidity		Panic Attacks		ASD/PTSD		Generalized Anxiety Disorder		Hypochondriasis		Obsessive-Compulsive Disorder		Specific Phobias		Total	
Diagnosis	M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F
Panic attacks/panic disorder	23	39			…	1	…	1	3	…	1	1	1	…	28	42
Trauma-related anxiety (ASD/PTSD)	10	17	…	1			…	…	…	…	…	…	…	…	10	18
Generalized anxiety disorder	2	7	…	1	…	…			1	…	…	…	…	…	3	8
Hypochondriasis	3	1	3	…	…	…	1	…			…	…	1	…	8	1
Obsessive-compulsive disorder	2	3	1	1	…	…	…	…	…	…			…	…	3	4
Specific phobias	…	2	1	…	…	…	…	…	1	…	…	…			2	2

[a]Data are presented as number of patients.
Abbreviations: ASD = acute stress disorder, F = female, M = male, PTSD = posttraumatic stress disorder.
Symbol: … = no patients with this diagnosis.

Table 2. Distribution of Patients With Anxiety Disorders Among Departments[a]

Department	Panic Attacks	ASD/PTSD	Generalized Anxiety Disorder	Hypochondriasis	Obsessive-Compulsive Disorder	Specific Phobias	Comorbidity of 2 Anxiety Disorders	Total
Emergency	24	10	2	3	3	1	6	49
Internal medicine	11	…	2	1	1	…	1	16
Psychosomatic medicine	4	4	1	…	…	…	1	10
Neurology	3	2	2	…	…	…	1	8
Cardiology	7	…	…	…	…	…	…	7
Trauma surgery	3	3	…	…	1	…	…	7
Gastroenterology	2	2	1	…	…	…	…	5
Intensive care	2	2	…	…	…	…	…	4
Rheumatology	2	…	…	…	…	…	…	2
Dermatology	…	2	…	…	…	…	…	2
Hematology	1	1	…	…	…	…	…	2
Nephrology	1	…	1	…	…	…	…	2
Gynecology	1	…	…	…	…	1	…	2
Outpatient pain clinic	1	…	…	…	…	…	…	1
General surgery	…	1	…	…	…	…	…	1
Radiology	…	…	…	…	…	…	1	1
Total	62	27	9	4	5	2	10	119

[a]Data are presented as number of patients.
Abbreviations: ASD = acute stress disorder, PTSD = posttraumatic stress disorder.
Symbol: … = no patients with this diagnosis.

anxiety disorder such as side effects of the medication (eg, benzodiazepine dependency) or self-medication (eg, alcohol intoxication), 9 (16.7%) had experienced a traumatic event (eg, accident or robbery), and 5 (9.3%) were being treated for a form of cancer. Finally, 16 patients (29.6%) were being treated for various somatic illnesses. The group of patients with panic attacks was most strongly represented among the patients with cardiac or respiratory problems (78.6%) (6 of 10, 60.0% in the group with problems associated with their anxiety disorder, 33.3% in the group with a traumatic event, 40.0% in the group of cancer patients, 50.0% in the group with various somatic illnesses).

Regarding the treatment procedures recommended by the attending psychiatrist, the most common procedure was to acutely treat the anxiety symptoms with benzodiazepines; 28 patients (23.5%) were treated with benzodiazepines. In 31 cases (26.1%), the psychiatrist also offered psychoeducation to the patients, informing them about the physical symptoms of fear and potential treatment options. Regarding long-term treatment, the attending psychiatrist recommended psychotherapy to 50 patients (42.0%). For pharmacologic long-term treatment, most commonly, selective serotonin or serotonin-norepinephrine reuptake inhibitors (SSRIs or SNRIs) were recommended (34 patients, 28.6%) as well as pregabalin (18 patients, 15.1%). Thirty-three patients (27.7%) were so strongly affected by their symptoms of anxiety that the attending psychiatrist decided that they required treatment in a psychiatric hospital. A more detailed description of the treatment procedures depending on the diagnosis is provided in Table 3. (For clarity, the 10 patients with comorbid anxiety disorders are presented in a separate row.)

Regarding the pharmacologic treatment specifically, patients with panic attacks were treated with the following medication: 23 (37.1%) with an SSRI or SNRI, 15 (24.2%) with benzodiazepines, and 11 (17.7%) with pregabalin. For patients with PTSD, 7 (38.9%) were treated with an SSRI or SNRI, 4 (22.2%) with benzodiazepines, and 2 (11.1%) with an atypical antipsychotic drug (olanzapine). Four patients (44.4%) with acute stress disorder received a sleep-inducing drug such as zopiclon and doxepin, and 3 (33.3%) were treated with benzodiazepines. Of the patients with GAD, 5 (55.6%) were treated with pregabalin and 4 (44.4%) received an SSRI; 3 patients (60.0%) with OCD received an SSRI and

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Table 3. Treatment Recommendations Based on Diagnosis for Patients With Only 1 Anxiety Disorder and With Comorbid Anxiety Disorders[a]

Treatment Diagnosis	Immediate Psychoeducation	Acute and Long-Term Pharmacotherapy	Long-Term Psychotherapy	Immediate Transfer to Psychiatry
Panic attacks/panic disorder (n = 62)	16 (25.8)	41 (67.7)	31 (50.0)	14 (22.6)
Posttraumatic stress disorder (n = 18)	2 (11.1)	9 (50.0)	8 (44.4)	7 (38.9)
Acute stress disorder (n = 9)	6 (66.7)	7 (77.8)	1 (11.1)	1 (11.1)
Generalized anxiety disorder (n = 9)	1 (11.1)	6 (66.7)	3 (3.3)	2 (22.2)
Specific phobias (n = 2)	1 (50.0)	1 (50.0)	…	1 (50.0)
Hypochondriasis (n = 4)	1 (25.0)	2 (50.0)	2 (25.0)	2 (50.0)
Obsessive-compulsive disorder (n = 5)	1 (20.0)	3 (60.0)	2 (40.0)	2 (40.0)
Comorbid anxiety disorders (n = 10)	2 (20.0)	3 (30.0)	3 (30.0)	4 (40.0)

[a]Data are presented as n (%).
Symbol: … = no patients with this diagnosis.

1 (20.0%) benzodiazepines. Finally, 50.0% of the patients with a specific phobia (1 patient) or hypochondriasis (2 patients) were treated with benzodiazepines. In the group of patients with comorbid anxiety disorder, 2 were treated with an SSRI (20.0%) and 1 with benzodiazepines (10.0%) by the consultation psychiatrist.

DISCUSSION

This study investigated the treatment of patients with anxiety disorders by a consultation psychiatrist within a general hospital in a 2-year-period. Of patients for whom psychiatric consultation was requested, 6.2% had symptoms of fear and anxiety. This percentage is similar to the results found in a European study,[10] which investigated the consultation-liaison psychiatric service delivery. In this study, 5.3% of patients had been diagnosed with an anxiety disorder based on *ICD-10* criteria.

More women experienced panic attacks, trauma-related anxiety, and GAD compared to men. No gender bias was observed for cases of OCD. This result is largely consistent with the findings of Jacobi et al,[2] who found a predominance of women over men in all anxiety disorders except for OCD. Interestingly, in our study, hypochondriasis followed a reversed pattern, affecting more men than women.

More than half of the patients who received consultations due to symptoms of fear and anxiety presented with acute panic attacks. This finding points to an interesting fact. Although the lifetime prevalence for panic disorder is much lower than for other anxiety disorders such as specific phobias and social phobia as well as GAD, patients with panic disorder are frequently found in general health care settings.[11,12] In a study conducted in Germany,[13] panic disorder was the most commonly treated mental disorder within the general population. This finding is most likely due to the fact that panic attacks present a high amount of somatic symptoms, which are interpreted by the patient in a catastrophic way such as indicating a heart attack. Therefore, these patients rarely directly contact mental health care institutions but instead seek treatment in emergency departments and cardiology departments in general hospitals. In our study, half of the patients with panic attacks sought help through the hospital's emergency department, closely followed by the departments of internal medicine and cardiology. Since 6 of the 13 diagnostic symptoms of a panic attack overlap with cardinal symptoms of cardiovascular diseases, it is very important to diagnostically differentiate symptoms caused by panic attacks from symptoms cause by cardiovascular diseases, especially since patients with heart disease seem to have a higher risk of comorbidly developing panic disorder,[14] as is also indicated by the overrepresentation of panic attacks in patients with cardiac or respiratory illnesses in this study. Therefore, the consultation psychiatrist plays an important role in correctly diagnosing panic attacks and informing the patient about the physical symptoms of fear.

In this context, it is also important to point out that within the setting of the consultation-liaison psychiatric service, it is not possible to follow up as to whether a patient with panic attacks develops a panic disorder. Since we merged the patients with panic attacks who did not yet fulfill the time criterion to be diagnosed with panic disorder with patients who were diagnosed with panic disorder into 1 category, the prevalence of patients with panic attacks in our study is higher than the actual prevalence of panic disorder in the general population.

Concerning the large proportion of psychiatric consultations in the emergency department, a study by Kropp et al[15] at the university hospital in Hannover, Germany, published in 2007 showed that psychiatric patients were strongly represented in the general emergency department. In this study,[15] patients with neurotic, stress-related, and somatoform disorders formed the third largest group of psychiatric patients within the general emergency department, after patients with problems due to psychoactive substance use and schizophrenia and schizotypal and delusional disorders.

Regarding the treatment that the consultation psychiatrist applied, the 2 most common immediate interventions were pharmacologic treatment with benzodiazepines as well as psychoeducation. Benzodiazepines are often used as a form of rapid emergency intervention since their anxiolytic and sedative effect is instantaneous, whereas other treatment options involving medication (ie, antidepressants such as SSRIs and SNRIs) take up to 2–4 weeks before showing their effects. The use of benzodiazepines, especially in patients with acute stress disorder, has to be viewed very critically since evidence suggests that this use might increase the risk for developing PTSD.[16] Furthermore, in patients with PTSD,

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severe withdrawal with increased anxiety may occur after the use of benzodiazepines.[17]

Given the high number of patients presenting with panic attacks, it also becomes clear why psychoeducation is a very important and effective emergency intervention. In many patients, anxiety quickly recedes once they understand what happened to them and that they are not in acute danger. In patients with a fully developed panic disorder, benzodiazepines can prove very effective alongside an SSRI at the beginning of the treatment, but, in the long run, benzodiazepines will result in dependency and possibly in reduced treatment gains from psychotherapy and should therefore not be encouraged.[18] Fifteen percent of patients were treated with pregabalin, and there is evidence indicating that pregabalin might be a powerful alternative to benzodiazepines, especially in patients with GAD (pregabalin is approved for treatment of GAD in Germany).[19] In our study, patients with GAD but also patients with panic attacks—here as an off-label use—were treated with pregabalin.

Regarding long-term treatment, 42% of patients were recommended to receive outpatient psychotherapy. After adding those patients (28%) who were recommended to receive further inpatient psychiatric care, this rate amounts to a total of 70% of patients with symptoms of anxiety that were recommended treatment with psychotherapy. This is in line with the guideline recommendations for the treatment of anxiety disorders in Germany, which emphasize treatment with psychotherapy, especially cognitive-behavioral therapy, as well as pharmacotherapy.[20] Furthermore, it seems that psychotherapy might produce more long-lasting effects in the treatment of anxiety than pharmacotherapy.[21]

Finally, it is important to point out that this study has several limitations. First, it is a purely descriptive, retrospective study based on the consultation sheets recorded by the consultation psychiatrists. No psychometric tests were conducted. The records do not include information relating to the success of the therapy recommended or even about the implementation by the patients and staff. Second, our study only covers a 2-year period in 1 general hospital in Berlin, and our case number of 119 patients cannot be seen as representative of the general population. Finally, no follow-up was conducted, and, therefore, it was not possible to assess whether the psychiatrists' recommendations were implemented or if they were effective.

Despite these limitations, the study highlights the importance of the consultation-liaison psychiatric service within a general hospital to ensure the best possible diagnostics as well as treatment for patients with anxiety disorders. Many patients who primarily suffer from symptoms of anxiety seek treatment in a general hospital, especially in the emergency department. It is therefore very important for the individual patient as well as the health care system that the correct treatment is initiated. Over the last few years, many studies investigated the effects of depression on physical illness, on the length of the hospital stay, and on the general outcome. Fewer, it appears, analyzed the impact of anxiety disorders on these variables. However, depression and anxiety disorders are often comorbidities, especially in the presence of a chronic physical illness.[22–24] Therefore, it is important that our scientific aims for the future also focus on anxiety disorders, since their adequate treatment could ensure a shorter recovery and more permanent health after hospitalization.

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